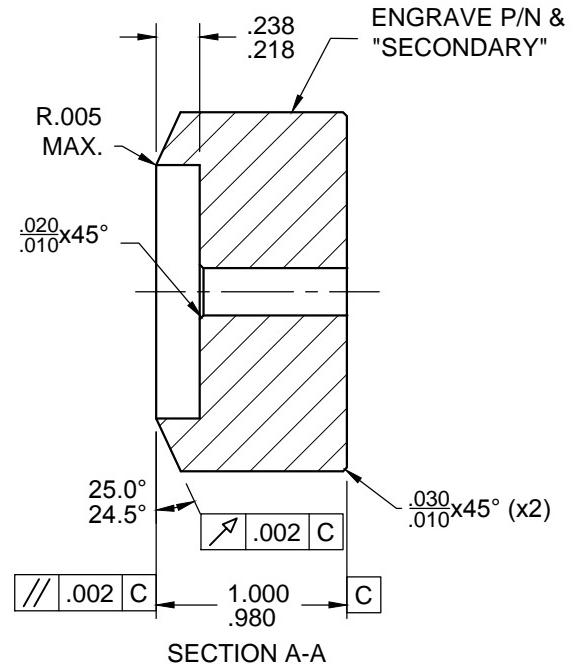
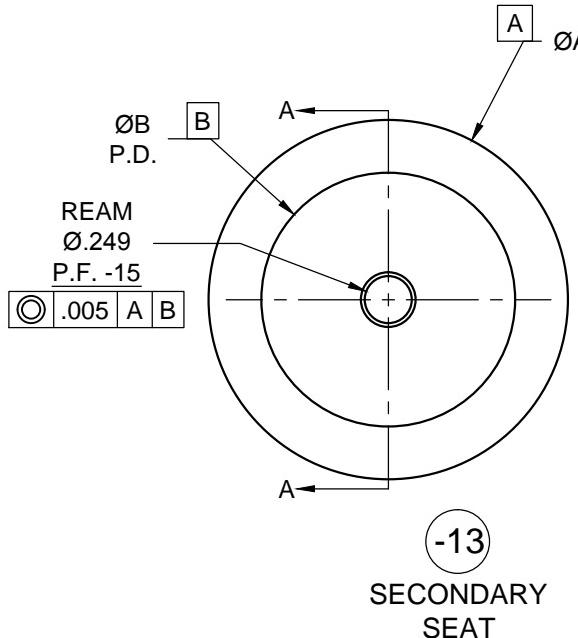


NOTES

- #### **1. BREAK ALL SHARP CORNERS (.015/.03).**

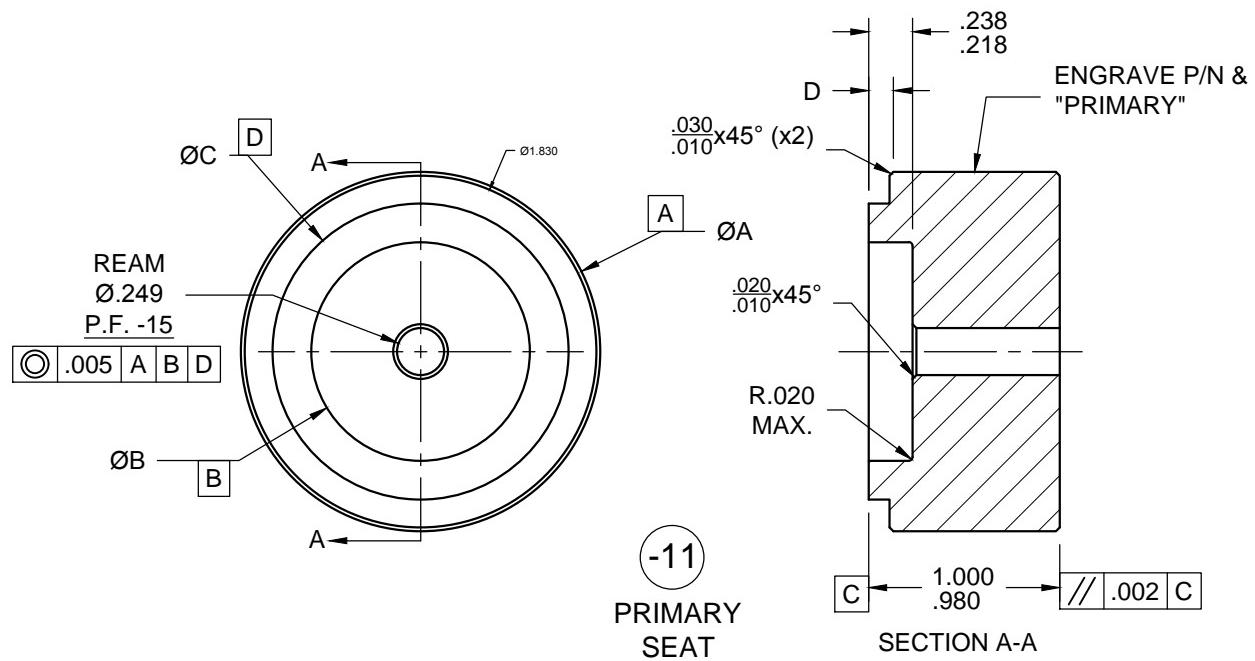
RB		RED BARN MACHINE		
TITLE	KSTCAS##		SERIES	
DWG NO.	SWAGING TOOL;		LOCATING PIN	REV 1
TOOL# (see chart)-15				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS $XXX \pm .005$ $.XX \pm .01$ $X \pm .1$			DRAWN BY: PERRITT	
			APPROVED	
			HEAT TREAT	
			FINISH SPEC	BLACK OXIDE
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES $.015 \times .45^\circ$ PR. 015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING			USED ON BEARING SEE Pg. 1	
SCALE	NTS	DATE	8-13-08	SHEET 9 of 9



NOTES

- #### **1. BREAK ALL SHARP CORNERS (.015/.03).**

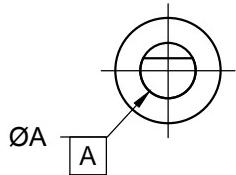
 RED BARN MACHINE	
TITLE KSTCAS## SERIES	
SWAGING TOOL; SECONDARY SEAT	
DWG NO.	TOOL# (see chart)-13
REV 1	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON: DECIMALS	
.XXX ± .005	FRACTIONS ± 1/32
.XX ± .01	ANGLES ± .5°
X ± .1	
HEAT TREAT	
FINISH SPEC	
BLACK OXIDE	
DRAWN BY: PERRITT	
APPROVED	
USED ON BEARING	
SEE Pg. 1	
SCALE	NTS
DATE	8-13-08
SHEET	8 of 9



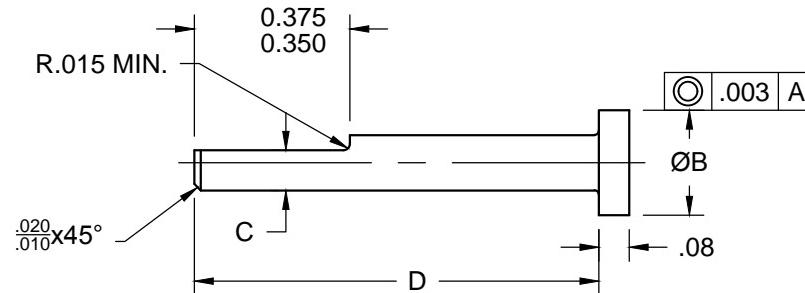
-11
PRIMARY
SEAT

NOTES

RB		RED BARN MACHINE		
TITLE	KSTCAS##		SERIES	
DWG NO.	SWAGING TOOL; PRIMARY SEAT		TOOL# (see chart)-11	REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1		DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH SPEC BLACK OXIDE USED ON BEARING SEE Pg. 1		
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR. 015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING				
SCALE	NTS	DATE	8-13-08	SHEET 7 of 9



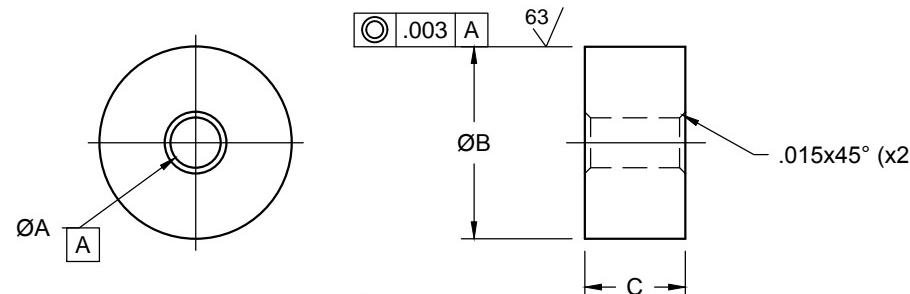
-9
PIN



NOTES

- #### **1. BREAK ALL SHARP CORNERS (.015/.03).**

RB		RED BARN MACHINE		
TITLE		KSTCAS## SERIES SWAGING TOOL; PIN		
DWG NO.		TOOL# (see chart)-9		REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 FRACTIONS ± 1/32 .XX ± .01 ANGLES ± .5° .X ± .1			DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH SPEC BLACK OXIDE USED ON BEARING SEE Pg. 1	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES 0.15 X 45° PR. 0.15 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING				
SCALE	NTS	DATE	8-13-08	SHEET 6 of 9



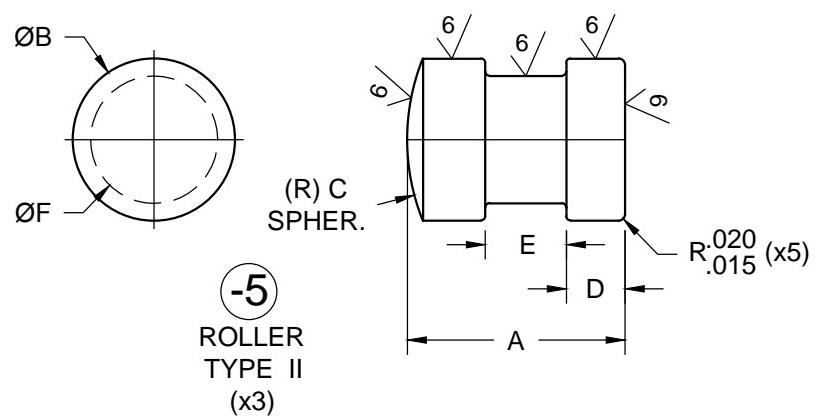
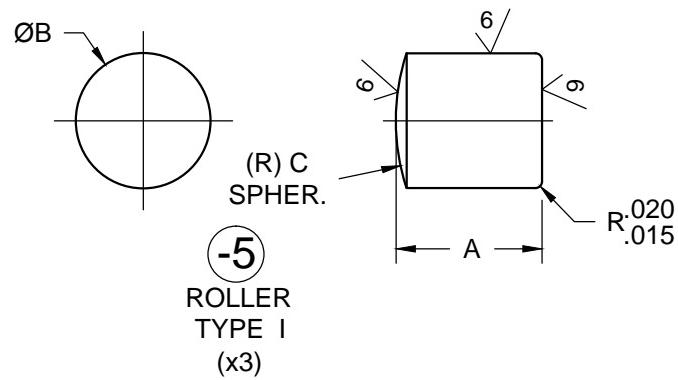
-7

GUIDE

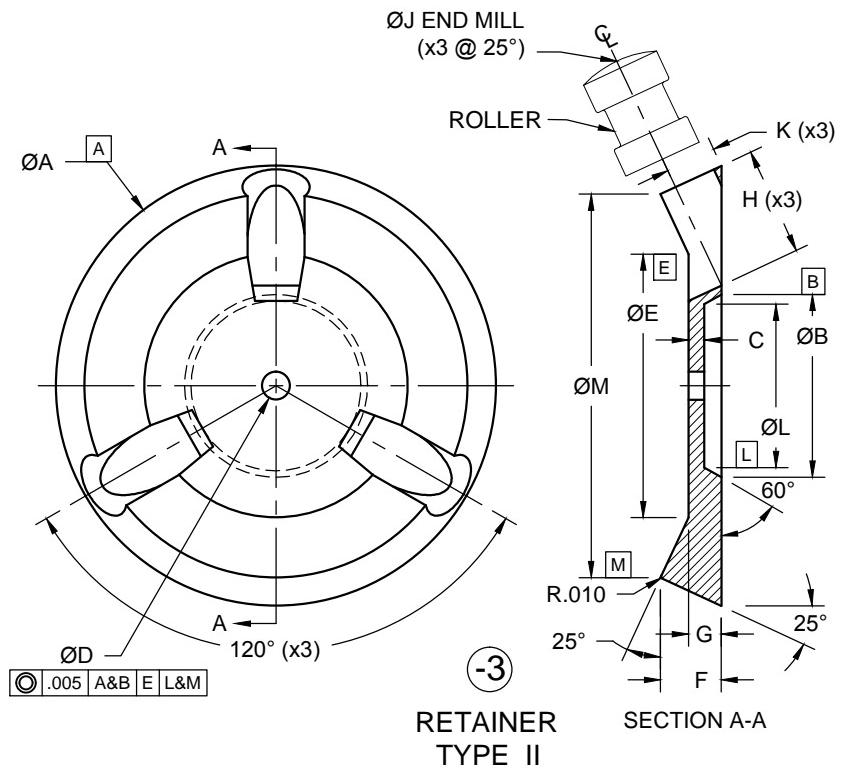
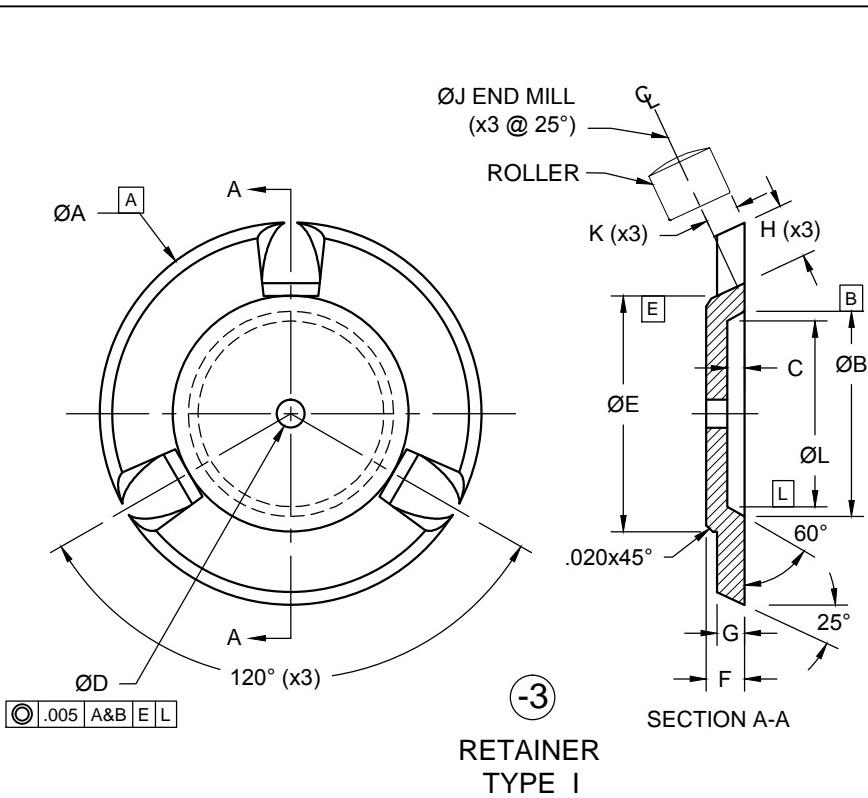
NOTES

- #### 1. BREAK ALL SHARP CORNERS (.015/.03).

 RED BARN MACHINE	
TITLE	KSTCAS## SERIES SWAGING TOOL; GUIDE
DWG NO.	TOOL# (see chart)-7
	REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 X ± .1	
FRACTIONS ± 1/32 ANGLES ± 5°	
HEAT TREAT FINISH SPEC	
DRAWN BY: PERRITT APPROVED	
USED ON BEARING SEE Pg. 1	
SCALE	NTS DATE 8-13-08 SHEET 5 of 9

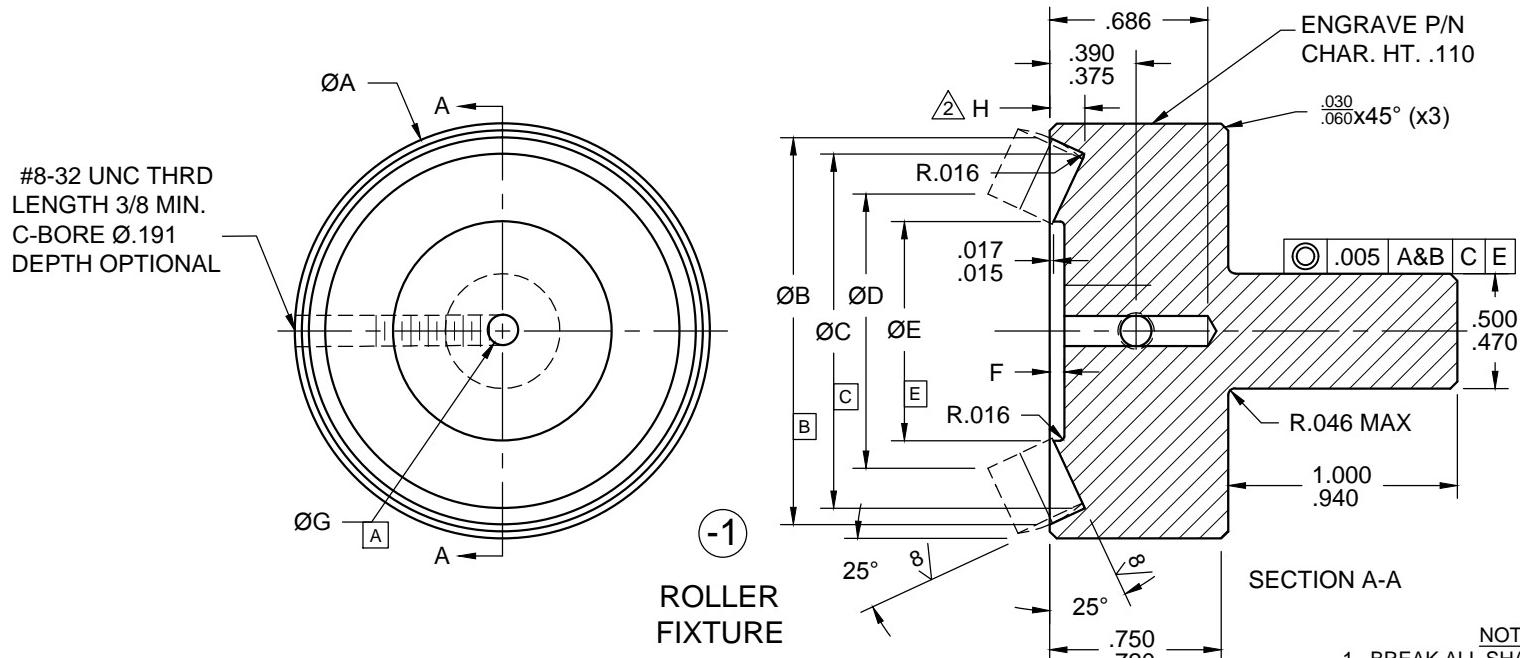


 RED BARN MACHINE	
TITLE KSTCAS## SERIES	
SWAGING TOOL; ROLLER (QTY. 3)	
DWG NO.	T-001# (see chart)-5
	REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON: DECIMALS .XXX ± .005 FRACTIONS ± 1/32 .XX ± .01 ANGLES ± .5° X ± .1	
DRAWN BY: PERRITT	
APPROVED	
HEAT TREAT FINISH SPEC	
USED ON BEARING	
SEE Pg. 1	
SCALE	NTS
DATE	8-13-08
SHEET 4 of 9	



 RED BARN MACHINE	
TITLE	KSTCAS## SERIES SWAGING TOOL; RETAINER
DWG NO.	TOOL# (see chart)-3
REV 1	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON:	
DECIMALS	
.XXX ± .005	FRACTIONS ± 1/32
.XX ± .01	ANGLES ± .5°
X ± 1	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR. .015 R 2. DIMENSIONAL TOLERANCES APPLY AFTER PLATING	
DRAWN BY: PERRITT	
APPROVED	
HEAT TREAT FINISH SPEC	
USED ON BEARING	
SEE Pg. 1	
SCALE	NTS
DATE	8-13-08
SHEET 3 of 9	

REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	-1 CH'D TOL. (H) WAS +/- .002 IS +/- .005.	6/17/13	BIM	GE

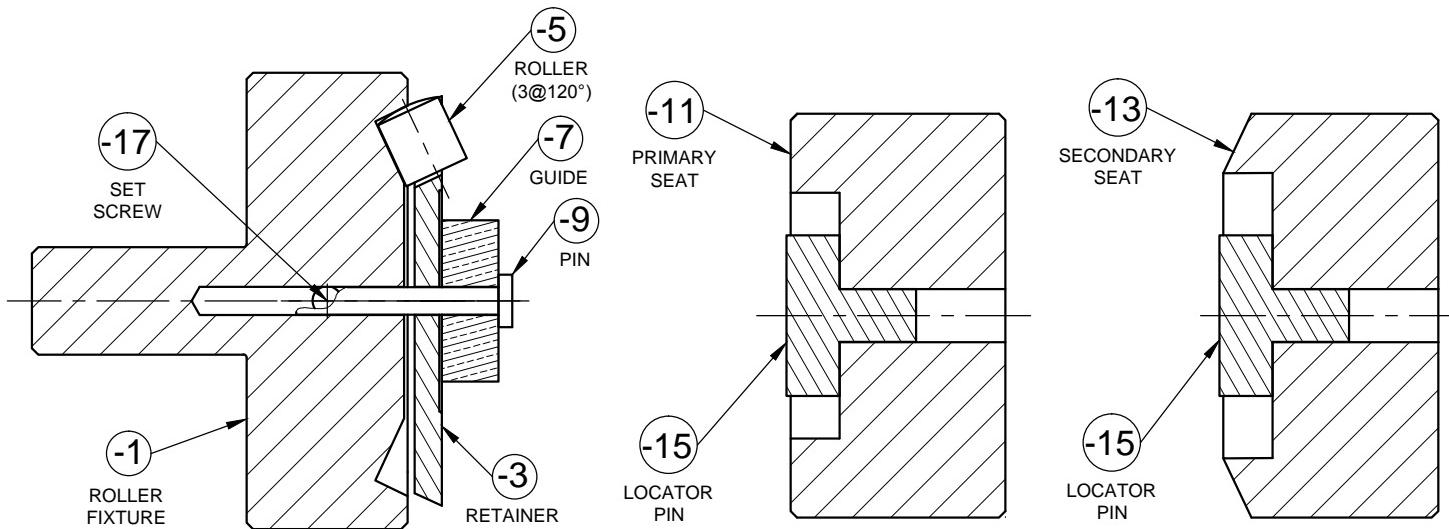


NOTES

1. BREAK ALL SHARP CORNERS (.015/.03).
2.  DIMENSION TO BOTTOM OF R.016 = H DIM.;
DIMENSION TO SHARP CORNER= H DIM.+.005.
3. -1 BEARING RACE SURFACES MUST HAVE
SMOOTH APPEARANCE, FREE FROM
MACHINING MARKS AND GROOVES.
4. DO FIRST ARTICLE INSPECTION
BEFORE HEAT TREATING.

TITLE		KSTCAS##	SERIES
		SWAGING TOOL;	ROLLER FIXTURE
DWG NO.	TOOL# (see chart)-1		REV 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAWN BY: APPROVED:	PERRITT
TOLERANCES ON: DECIMALS .XXX ± .005 FRACTIONS ± 1/32 .XX ± .01 ANGLES ± 5° X ± .1		HEAT TREAT FINISH SPEC	RC 55-60 BLACK OXIDE
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 X 45° PR. 015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		USED ON BEARING SEE Pg. 1	
SCALE	NTS	DATE	8-13-08
		SHEET	2 of 9

REV		DESCRIPTION		DATE	INITIAL	APPROVED
1		-1 CH'D TOL. (H) WAS +/- .002 IS +/- .005.		6/17/13	BIM	GE



NOTES

- 5 ROLLERS MUST TURN FREELY IN -3 RETAINER POCKETS.
- 5 ROLLERS & -3 RETAINER MUST TURN FREELY WHEN TOOL IS COMPLETELY ASSEMBLED.
- FLAT END OF ROLLERS MUST FACE TOWARDS THE CENTER OF THE TOOL WHEN ASSEMBLED.

ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	B/O INFORMATION OR SPECIFICATIONS	Pg.
		-1	1	ROLLER FIXTURE	SEE CHART	2
		-3	1	RETAINER	SEE CHART	3
		-5	3	ROLLER	SEE CHART	4
		-7	1	GUIDE	SEE CHART	5
		-9	1	PIN	SEE CHART	6
		-11	1	PRIMARY SEAT	SEE CHART	7
		-13	0 or 1	SECONDARY SEAT	SEE CHART	8
		-15	1 or 2	LOCATING PIN	SEE CHART	9
	B/O	-17	1	SOCKET HEAD SET SCREW	#8-32 x 1/4	N/S

BEARINGS & TOOLS COVERED	
BEARING #	TOOL #
CAS10-31A1-518	KSTCAS10
S251W125-5, CAS12-31A1-518	KSTCAS12

TITLE		KSTCAS## SERIES	
DWG NO.		TRI-ROLLER SWAGING TOOLS	
TOOL # (SEE CHART ABOVE)		REV	1
UNLESS OTHERWISE SPECIFIED		DRAWN BY: PERRITT	
DIMENSIONS ARE IN INCHES		APPROVED	
TOLERANCES ON:		HEAT TREAT LISTED PER ITEM	
DECIMALS XXX ± .005		FINISH SPEC LISTED PER ITEM	
XX ± .01		ANGLES ± .5°	
X ± .1		USED ON BEARING	
FRACTIONS ± 1/32		SEE ABOVE	
UNLESS OTHERWISE SPECIFIED			
1. BREAK ALL SHARP EDGES			
.015 x 45° PR.015 R			
2. DIMENSIONAL LIMITS APPLY AFTER PLATING			
SCALE	NTS	DATE	8-13-08
		SHEET 1 of 9	

ASSY QTY	ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	MAT.	B/O INFORMATION OR SPECIFICATIONS
			-1	1	RND	6061	Ø8-1/4 x 3-7/8
ASSY #							

REVISIONS					
REV	DESCRIPTION	DATE	INITIAL	APPR	
—	—	—	—	—	—

**NOT APPROVED FOR PRODUCTION
APPROVED FOR PRODUCTION**

DESCRIPTION	MAT.	B/O INFORMATION OR SPECIFICATIONS	Pg.
	6061	Ø8-1/4 x 3-7/8	2

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ON:
DECIMALS
XXX $\pm .005$ FRACTIONS $\pm 1/32$
XX $\pm .01$ ANGLES $\pm 5^\circ$
X $\pm .1$
UNLESS OTHERWISE SPECIFIED
HEAT
FREIGHT
SPEC
USED ON MODEL

DRAWN BY: PERRITT
APPROVED
HEAT
FREIGHT
SPEC
USED ON MODEL

RE

RB RED BARN MACHINE

 RED BARN MACHINE	
TITLE	
DWG NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS $.XXX \pm .005$ FRACTIONS $\pm 1/32$ $.XX \pm .01$ ANGLES $\pm .5^\circ$ $X \pm .1$	
DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH SPEC	
USED ON MODEL 1. BREAK ALL SHARP EDGES $.015 \times 45^\circ$ PR. .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE	NTS
DATE	8-15-07
SHEET	1 of

NOT APPROVED FOR PRODUCTION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

PART #	QTY	DESCRIPTION
-1	1	--

DRAWN BY: PERRITT	RB RED BARN MACHINE	TITLE
CHECKED		
HEAT		
TREAT		
FINISH SPEC		
USED ON MODEL	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
?	TOLERANCES ON: DECIMALS .XXX ± .005 FRACTIONS ± 1/32 .XX ± .01 ANGLES ± 5°	
	UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES 0.015 x 45° PR. 0.015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
DWG NO.	PART #	REV.
SCALE NTS	DATE 1-28-06	SHEET 1 of 1